THE USE OF MEDICINAL PREPARATION GINKGO BILOBA IN THE PROCESS OF PROVIDING COMPLEX PSYCHOCORRECTIVE ASSISTANCE TO FAMILIES WITH THE CONSEQUENCES OF WAR PSYCHOTRAUMA

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Summary

Introduction. The prolonged extreme crisis situation of the full-scale war in Ukraine has a negative impact on the institution of the family, the structure and functions of the modern Ukrainian family. Therefore, the development of effective approaches to the psychocorrection of family relations in wartime is an urgent topic of research.

The aim. The purpose of the work is to develop and test a model of complex psychocorrection of family relations using the drug Ginkgo biloba in wartime conditions.

Materials and methods. Analytical, psychodiagnostic, statistical research methods and the method of conceptual modeling are used in the work. The methodological basis of the study was the understanding of a person as a whole multi-level biopsychosocial living system and an empirical approach. The research sample consisted of 44 young couples (88 people), temporarily displaced from the zone of active hostilities. The subjects were randomly divided into two groups: experimental (21 couples, 42 people) and control (23 couples, 46 people). Psychodiagnostic methods were used in the work: Questionnaire «Diagnosis of personality behavior in a conflict situation» (O. S. Kocharyan); Methodology «Settings in a married couple» (Y. Ye. Alyoshina); Communication in the family (Y. Ye. Alyoshina, L. Ya. Gozman, O. M. Dubovska); Marriage satisfaction test questionnaire (V. V. Stolin, T. L. Romanova, G. P. Butenko); Connor-Davidson resilience scale-10. Complex psychocorrective intervention was carried out in both groups for three weeks based on the author’s model, which contained four groups of factors: individual, family, group, social, and consisted of seven content blocks: 1) correction of individual mental states of each spouse and development of resilience; 2) correction of communication skills and internal and external communication styles of spouses; 3) correction of family attitudes and values; 4) correction of the educational function of the family; 5) correction of the protective function of the family; 6) increasing the vitality of the family and forming its psychotherapeutic function; 7) formation of satisfaction with marriage and determination of constructive prospective directions for the development of family relations. In addition, the respondents of the experimental group received the Ginkgo biloba drug in the form of a standardized leaf extract (Ginkgo biloba-F capsules 400 mg No. 60 of the domestic manufacturer PTF LLC Pharmacom) for three weeks.

Results. A complex model of psychocorrection of family relationships using the drug gingko biloba was theoretically substantiated, developed and tested, and its effectiveness in providing medical and psychological assistance to families with the consequences of war psychotrauma was demonstrated.

Conclusions. It has been proven that the developed and tested comprehensive psychocorrective technique is effective in increasing the resilience of families with the consequences of war psychotrauma. A statistically reliable and significant positive effect of the Ginkgo biloba drug on the adaptive resources and vitality of the individual has been demonstrated, which contributes to the increase of stress resistance and the normalization of family relationships and allows to recommend the Ginkgo biloba drug in a complex of psychocorrective and psychoprophylactic measures to overcome the consequences of war psychotrauma.
**Prospective research** is planned to be directed to the study of the impact of the war psychotraumatic situation on children and the elderly and the development of appropriate psychocorrective and psychoprophylactic methods.

**Keywords:** war psychotrauma, families with the consequences of war psychotrauma, temporarily displaced persons, psychocorrection, psychoprophylaxis, medicinal preparation Gingko biloba

**INTRODUCTION**

The term «family» usually refers to persons who live together, have a common life, mutual obligations and rights, while performing social functions, the most important of which are the support of life and development of family members, the reproduction of society, the promotion of the improvement of the democratic situation, ensuring primary socialization of children, preservation and imitation of cultural and spiritual traditions, ensuring connection between generations [18; 19]. These functions change over time in accordance with social transformations [28]. The regulation of family relationships depends on certain historical conditions and is guided by existing social and intra-family norms, traditions and customs [6; 18]. The situation of a full-scale war in Ukraine creates a long-term extreme crisis situation, negatively affecting the institution of the family, which adapts to existence in new conditions and in new forms [4; 9; 10; 36]. Experiencing the situation of a full-scale war has a negative external impact on the structure and functions of the modern Ukrainian family, when the family experiences the loss of its members, when there is a forced separation and change of place of residence, many psychosocial and material problems arise, despite the fact that the future prospects are uncertain and unpredictable [2; 37]. The war situation causes the emergence of a state of family anomie, which is characterized by the loss of former normative bases and value orientations, the destruction of habitual behavioral stereotypes, with the insufficient development of adequate adaptive strategies [2]. Therefore, the development of effective approaches to the psychocorrection of family relations in wartime is an urgent topic of research.

**LITERATURE REVIEW**

**The influence of the war situation on family relations**

Data from the sources of scientific literature indicate that the situation of a full-scale war became a serious test for the institution of the family in Ukraine, causing the development of deviance in family relationships [3; 7; 10; 15; 22]. The phenomenon of a distant family has emerged, in which family members are distant from each other for a long time [27]. The prolonged military conflict on the territory of Ukraine contributes to the aggravation of family problems, disrupting the family’s performance of its most important functions, as a result of which children, who experience the loss of a safe environment and their usual way of life, witness aggression, destruction and death, especially suffer [4; 14; 15; 28]. Traumatic experiences related to war cause painful memories and associations, aggressive ideas, unbalanced negative emotional reactions, states of psychophysical exhaustion, conflictual relationships between family members [4; 11; 12; 37]. The uncertainty of the future and the constant risk to life in the conditions of a full-scale war create extreme crisis conditions for the modern Ukrainian family, cause a reassessment of life values, and encourage family members to take on new social roles [4; 15; 27; 28]. The problems arising in connection with the war situation are a crisis for the family and affect its existence, increasing the risk of psycho-traumatic experiences and the emergence of neuropsychological disorders as a result [15; 22; 34].

The impact of a full-scale war on family relationships is manifested in the fact that: there is a significant weakening of the protective material and psychological function of the family; the adaptation mechanisms of the family to crisis social phenomena of wartime, such as the forced migration of the civilian population from the zone of active hostilities, are exhausted; there is a transformation of family roles, a violation of understanding and a complication of relations between family members; insufficient educational function of the family [4; 15; 28]. The life plans of the family in the conditions of war are characterized by instability, which causes a state of uncertainty and helplessness [33]. All these negative factors are considered by researchers as pathogenic for the mental health of family members, which becomes unable to perform a protective function and provide support in difficult life situations [15; 16]. War is a new negative experience, the process of acquiring which exhausts the adaptive mechanisms of the family, increasing the risk of psychopathological disorders in its members, which makes it urgent to provide psychological support and support for affected families, psychocorrective and psychoprophylactic interventions [4; 15; 28].

At the same time, data from scientific literature sources indicate that war as a crisis event has an ambiguous impact on family relationships. On the one hand, there is the presence of chronic psychological traumatization, lack of communication and emotional alienation, disruption of educational and communicative family functions [20;
The process of psychological support for families with the consequences of war psychotrauma should be based on a genetic- psychological- axiological approach aimed at: increasing the level of self-control; normalization of self-esteem and integration of the individual; developing skills of successful effective communication, interaction in the family and other social communities; formation of the ability to adapt to the transformation of the social and cultural space and increase the adaptive resource of the organism; creating a favorable psychological climate in the family and solving its social problems [2; 18; 21].

Possibilities and principles of using herbal preparations of Ginkgo biloba in the process of complex psychocorrective assistance to families with the consequences of war psychotrauma

Ginkgo (Ginkgo biloba L.) is a very interesting plant with a wide range of applications, from creation in landscape design compositions to use in medicine and pharmacy. Medicinal properties of Ginkgo biloba, high biologically active potential of this plant determine its importance in both folk and traditional medicine [40]. Ginkgo biloba contains 13 biflavonoids, including amentoflavone, bilobetin, sciadopitysin, ginkgetin, and isoginketin. Terpene lactones (bilobalide and ginkgolides A, B and C) and flavone glycosides (isoramnetin, quercetin and kaempferol) are considered to be the most important pharmaceutical compounds of G. biloba. Due to the content of the specified biologically active substances in Ginkgo biloba, preparations based on this plant are able to exert antioxidant, anticancer, antiviral, antibacterial, antifungal, anti-inflammatory effects on the human body, which are increasingly used for the treatment of cardiovascular, metabolic, neurodegenerative and psychoneurological diseases [32; 33; 35; 39; 41]. Data from scientific literature sources prove the anti-stress effect of Ginkgo biloba and its positive effect on cerebral blood flow, mnestic and cognitive functions, parameters of attention, and mood [31]. Ginkgo biloba exerts a systemic effect on the regulation of pathophysiological conditions, which determines the prospect of wide clinical use of its leaf extract in various pathological conditions [30; 32; 35]. Thus, data from scientific literature sources indicate the presence of high potential of Ginkgo biloba for research and application in pharmacy and clinical practice [38].

The prospect of using Ginkgo biloba leaf extract in a complex of psychocorrective and psychoprophylactic measures aimed at overcoming and preventing the consequences of war psychotrauma is due to the natural origin of this drug and the multi-vector nature of its pharmacotherapeutic action [40].

Problem statement

The war situation in Ukraine had a negative impact on family life and the system of family values [28]. The data of scientific literature sources indicate the temporality
and reversibility of the transformation of the family and its functions depending on external factors [1; 2; 5; 8; 13]. However, the duration of the war situation and the uncertainty and unpredictability of its dynamics determine both the need for social and psychological support of the institution of the family in modern Ukraine, and the provision of scientific support for this process [15; 17; 21], in order to reduce the negative impact both on the current state of the family and on its role in the formation of future generations.

The socio-economic crisis of wartime determines the need to find and bring to the market effective drugs with complex clinical, anti-stress and prophylactic action, available to the general population [39]. Therefore, the uniqueness of the phytochemical composition of Ginkgo biloba draws attention to the prospect of using its leaf extract as a medicinal product and dietary supplement in a complex of psychocorrective and psychoprophylactic measures aimed at overcoming war psychotrauma [40].

The scientific significance of the work lies in the theoretical justification of the use of the Ginkgo biloba drug in the complex model of psychocorrective assistance to families with the consequences of war psychotrauma. The practical significance of the research results lies in the development of a complex model of psychocorrection of family relations using the drug Ginkgo biloba, aimed at improving the effectiveness of providing medical and psychological assistance to families with the consequences of war psychotrauma.

THE AIM

The aim of the study is to develop and test a model of complex psychocorrection of family relations using the drug Ginkgo biloba in wartime conditions.

Objectives of the study:
1. To analyze data from sources of scientific literature on the impact of the war situation on family relationships and psychocorrection of family relationships.
2. Conduct a formative experiment on comprehensive psychocorrective assistance to families with the consequences of war psychotrauma.
3. To develop a model of comprehensive psychocorrective assistance to families with the consequences of war psychotrauma with the use of the Ginkgo biloba drug and to evaluate its effectiveness.

Research hypothesis: the use of the Ginkgo biloba drug increases the effectiveness of providing complex psychocorrective care to families with the consequences of war psychotrauma.

Research methods: analytical, psychodiagnostic, statistical, conceptual modeling.

MATERIALS AND METHODS

Research design. The research was conducted in several successive stages. At the first stage, the relevance of the research topic was determined, an analytical review of the sources of scientific literature was carried out, the investigated problem was outlined, the goal, task and hypothesis of the research were formulated, and its scientific and practical significance was shown. At the second stage, a randomized sample of subjects was formed, valid psychodiagnostic methods were selected, and a model of complex psychocorrective intervention was developed. The third stage consisted in checking the effectiveness of the developed psychocorrection model and evaluating the effect of the Ginkgo biloba drug on the results of psychocorrection of families with the consequences of war psychotrauma. The fourth, final stage of the research consisted in formulating conclusions and determining promising directions for further research.

Research methodology. The methodological basis of the study was the understanding of a person as a whole multi-level biopsychosocial living system consisting of structural, functional, mental, conscious and behavioral-activity levels [19]. The analysis of the transformation of family relations as a result of experiencing war psychotrauma and as a result of psychocorrective interventions was carried out on the basis of an empirical approach [26].

Sample. 44 young couples (88 people) temporarily displaced from the zone of active hostilities took part in the study. The average age of the respondents was 26.2 years, the family had 1-2 children, the level of education of the spouses was incomplete higher education, the level of material wealth was average. The subjects were randomly divided into two groups: experimental (21 couples, 42 people) and control (23 couples, 46 people).

Research methods. The respondents of the experimental group underwent complex psychocorrective intervention according to the developed model using the drug Ginkgo biloba. Respondents in the control group underwent the same psychocorrection program, but without the addition of the Ginkgo biloba drug. Psychodiagnostic research was conducted twice: before and after psychocorrective interventions. The following valid and reliable (Cronbach’s α in the range of 0.7-0.9) psychodiagnostic methods were used in the work:

- Questionnaire «Diagnostics of personality behavior in a conflict situation» (O. S. Kocharyan) [26, 292], which consists of 89 statements requiring «Yes» and «No» answers. The behavior of the individual in a conflict situation is evaluated according to 8 scales: I – non-constructiveness of the partners’ attitudes towards marriage; II – depressive moods; III – protective
mechanisms; IV – defensive mechanisms; V – presence of aggression; VI – somatization of anxiety; VII – fixation on psychotrauma; VIII scale is control. Evaluation of indicators: less than 30 points – low indicators; 30-70 points – average indicators; 30-40 points – average indicators with a tendency to low; 60-70 points – average indicators with a tendency to high; more than 70 points – high indicators.

- Methodology «Settings in a married couple» (Y. Ye. Alyoshina) [26, 401] – consists of 40 questions and 10 scales: I – attitude towards people; II – alternative between a sense of duty and pleasure; III – attitude towards children; IV – autonomy or dependence; V – attitude to divorce; VI – romance of relationships; VII scale – meaning of the sexual sphere; VIII – prohibition of sexual topics; IX – orientation to traditional ideas; X – attitude to money. The assessment is based on a 4-point system.

- Communication in the family (Y. Ye. Alohishina, L. Ya. Gozman, O. M. Dubovska) [28, 417] – a method consisting of 48 statements and 6 scales: I – level of trust; II – level of mutual understanding; III – similarity of views; IV – presence of «family language»; V – ease of communication in the family; VI – psychotherapy of communication. The answers are evaluated according to the 4-point system and calculation of the average arithmetic index.

- Test-questionnaire of satisfaction with marriage (V. V. Stolin, T. L. Romanova, G. P. Butenko) [28, 433], which consists of 24 questions, the answers to which are evaluated from 0 to 2 points, and the maximum total score equal to 48. The method allows you to determine the level of well-being of marital relations: 0-16 points – absolutely unhealthy; 17-22 points – rather unhealthy; 23-26 points – transitional; 29-32 points – rather healthy; 33-38 points – healthy; 39-48 points – absolutely safe.

- Connor-Davidson resilience scale-10 [12, 17] – the technique allows you to assess the resilience of an individual in war conditions and contains 10 statements, the answers to which are evaluated on a 5-point Likert scale (from 0 – «completely false» – to 4 – «true in almost all cases»). Level of resilience: from 0 to 15 points – low; 16-20 points – below average; 21-25 points – average; 26-30 points – higher than average; 31-40 points – high.

**Methodology of psychocorrection.** Complex psychocorrective intervention was carried out for three weeks on the basis of the author’s model, which was based on the recommendations of O. M. Kokun [26] and I. Yurchenko [29] and contained four groups of factors: individual, family, group and social. The model of complex psychocorrective intervention consisted of several content blocks: 1) correction of individual mental states of each spouse and development of resilience; 2) correction of communication skills and internal and external communication styles of spouses; 3) correction of family attitudes and values; 4) correction of the educational function of the family; 5) correction of the protective function of the family; 6) increasing the vitality of the family and forming its psychotherapeutic function; 7) formation of satisfaction with marriage and determination of constructive prospective directions of development of family relations (fig. 1) and was applied in both studied groups.

In addition, the respondents of the experimental group also received the Ginkgo biloba preparation in the form of a standardized leaf extract (Ginkgo biloba-F capsules 400 mg No. 60 of the domestic manufacturer PTF LLC Pharmacom) for three weeks, 1 capsule 3 times a day during meals, drink water. These capsules contain Ginkgo biloba extract 24 %, centrolex-F, vitamin premix (vitamin E, vitamin B1, B2, B5, B6, B9, B12, C, nicotinamide, D-biotin), as well as auxiliary components: sugar, starch, calcium stearate.

At the individual level, psychocorrection measures were aimed at increasing the respondents’ ability to experience positive emotions, forming a positive worldview and readiness to find a constructive solution to problematic life issues, realistic expectations and aspirations, restoring control over oneself and the situation, training in self-control skills, self-management, self-regulation, self-improvement, increasing the body’s adaptive capacity, restoration and development of its psychophysical resources.

At the family level, training exercises were offered aimed at restoring communication relationships, the ability to hear each other and provide emotional, material, informational, and emotional support, to be responsible for the performance of parental functions, to raise children, to pay due attention to children and understand their needs, including emotional contact and a sense of security.

Group work contributed to the formation of interaction skills, mutual understanding and mutual support, a sense of belonging and cohesion, and the ability to cooperate. Working in a group helped to see the family situation through the eyes of others, to learn to analyze it and find optimal ways to solve problems, to see positive moments of family interaction, which contributed to an increase in the level of satisfaction with family relations and marriage in general.

The use of game and art therapy techniques helped in a non-directive way to encourage the spouses to realize the problem and find ways to solve it, to form the ability to positively interact with others both in the family and in society as a whole.
Factors of psychocorrective influence

Individual
- Positive coping
- Positive aspirations
- Positive thinking
- Behavior control
- Realism
- Altruism
- Callisthenics

Family
- Emotional connections
- Communication, interaction
- Support
- Proximity
- Education
- Adaptability

Group
- Positive psychological climate
- Team work
- Cohesion

Public
- Affiliation
- Cohesion
- Connections
- Collectiveness

Figure 1. A model of complex psychocorrection of family relationships and the viability of families with the consequences of war psychotrauma

Statistical processing of research results. Microsoft Excel was used to collect, sort and visualize information. For the statistical analysis of the obtained empirical data, the IVM SPSS (Statistical Package for the Social Science) program — «Statistical Package for the Social Sciences» of the 2022 edition was used. Statistical calculations were carried out using the Social Science Statistics online calculator. The statistical reliability and significance of the obtained results was assessed based on the calculation of the Student’s t-test for dependent and independent samples. Also, to compare the research results of the experimental and control groups of respondents, a one-factor ANOVA test was used — analysis of variance for repeated measurements. In addition, Cohen’s d indicator (effect size) was used to compare the data of the experimental and control groups, which characterized the expected difference between the average values of the indicators of the experimental and control groups of respondents, divided by the expected standard deviation. This made it possible to assess not only the statistical reliability and significance of the difference between the determined indicators, but also their actual difference.

Limitations. The sample of respondents of the experimental and control groups is relatively small, which is due to strict criteria for its formation, such as the age of the spouses, the composition of the family, and the experience of war psychotrauma as temporarily displaced persons who suffered losses as a result of the war. The simple randomization procedure made it possible to avoid systematic error and ensure the relevance of the sample, which made it possible to extrapolate the data obtained during the study of the sample population to the general population of young Ukrainian families who experienced war psychotrauma. The study involved studying the dynamics of the psychological state of the spouses, without taking into account their children, psychocorrective interventions for which it is planned to be investigated in further work. Also, no research was conducted on the families of combatants, which is also planned to be done in the future. Another direction of future research, not taken into account in this work, is the study of the peculiarities of the experience of war psychotrauma by elderly people.

RESULTS

The psychodiagnostic study was conducted twice: before and after providing the respondents with complex psychocorrective care for three weeks, and the respondents
of the experimental group additionally received the drug Ginkgo biloba.

A comparison of the results of the study of the dynamics of behavior in a conflict situation of the respondents of the experimental and control research groups is presented in tab. 1.

In the initial study, the indicators of behavior in a conflict situation of the respondents of both the experimental group and the control group were high, while no significant statistical differences were observed between the indicators of the experimental and control groups (p>0.05; r<0.50). In the control group, as a result of the implementation of complex psychocorrective measures, there was a statistically reliable and significant (p<0.05; r≥0.50) decrease in indicators on the vast majority of scales of the technique to the range of average values with a tendency to high.

### Table 1

<table>
<thead>
<tr>
<th>Scale</th>
<th>GPA</th>
<th>Student’s t-test</th>
<th>p</th>
<th>ANOVA (f-ratio value)</th>
<th>p</th>
<th>d Cohen</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>80.2±8.6</td>
<td>59.1±6.3</td>
<td>-29.01</td>
<td>0.00</td>
<td>245.21</td>
<td>0.00</td>
<td>2.80</td>
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<tr>
<td>II</td>
<td>76.1±5.4</td>
<td>54.6±7.2</td>
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<td>0.00</td>
<td>883.99</td>
<td>0.00</td>
<td>3.38</td>
</tr>
<tr>
<td>III</td>
<td>59.5±10.1</td>
<td>30.3±8.1</td>
<td>-14.55</td>
<td>0.00</td>
<td>211.60</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>IV</td>
<td>70.8±9.2</td>
<td>52.4±5.2</td>
<td>-14.55</td>
<td>0.00</td>
<td>211.60</td>
<td>0.00</td>
<td>2.46</td>
</tr>
<tr>
<td>V</td>
<td>82.2±5.4</td>
<td>58.6±6.9</td>
<td>-49.75</td>
<td>0.00</td>
<td>2475.38</td>
<td>0.00</td>
<td>3.81</td>
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<tr>
<td>VI</td>
<td>78.3±6.5</td>
<td>51.5±6.2</td>
<td>-94.64</td>
<td>0.00</td>
<td>3043.49</td>
<td>0.00</td>
<td>4.22</td>
</tr>
<tr>
<td>VII</td>
<td>85.9±2.8</td>
<td>53.5±2.8</td>
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<td>0.00</td>
<td>27105.13</td>
<td>0.00</td>
<td>11.57</td>
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<tr>
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<td>68.4±5.5</td>
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<td>176.98</td>
<td>0.00</td>
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<td>II</td>
<td>76.4±5.1</td>
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<td>0.00</td>
<td>169.01</td>
<td>0.00</td>
<td>1.68</td>
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<tr>
<td>III</td>
<td>59.3±10.2</td>
<td>56.9±8.3</td>
<td>-3.99</td>
<td>0.02</td>
<td>15.96</td>
<td>0.02</td>
<td>0.26</td>
</tr>
<tr>
<td>IV</td>
<td>71.2±8.6</td>
<td>67.4±5.2</td>
<td>-3.53</td>
<td>0.02</td>
<td>11.59</td>
<td>0.03</td>
<td>0.53</td>
</tr>
<tr>
<td>V</td>
<td>82.4±5.2</td>
<td>69.5±7.1</td>
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<td>460.97</td>
<td>0.00</td>
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<tr>
<td>VI</td>
<td>78.5±6.9</td>
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<td>-69.40</td>
<td>0.00</td>
<td>2755.60</td>
<td>0.00</td>
<td>1.25</td>
</tr>
<tr>
<td>VII</td>
<td>86.2±2.4</td>
<td>67.3±4.9</td>
<td>-23.91</td>
<td>0.00</td>
<td>571.54</td>
<td>0.00</td>
<td>4.90</td>
</tr>
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</table>

On the other hand, in the experimental group, where Ginkgo biloba was added to complex psychocorrective measures, there was a statistically reliable and significant (p<0.05; r≥0.50) normalization of indicators to average values (range of 50–60 points).

The dynamics of the average indicators of attitudes according to the methodology of Y. E. Alyoshina in married couples of respondents of the experimental and control groups, examined before and after psychocorrection, is presented in tab. 2.

Statistical processing of the obtained results using the methods of determining the Student’s criterion and carrying out variance analysis ANOVA showed that the difference between most of the indicators of both groups before and after psychocorrective measures is statistically reliable and significant (p<0.05). At the same time, the results of calculating Cohen’s d indicate that, in fact, this difference is not significant (r<0.50).

Nevertheless, based on the comparison of the results obtained on all 10 scales of the technique before and after psychocorrection, it can be asserted that there is a clear tendency towards the normalization of the attitudes of the studied family couples, both in the experimental group and in the control group. At the same time, if the attitude towards divorce did not change significantly (p>0.05, r=0.00), then the level of perception of romantic love increased slightly (from 1.4±0.2 to 1.8±0.3 points, with p<0.05 and r= –0.61), during the transformation of the understanding of the role of women in the family, awareness of its modern significance.

The dynamics of the communication style in the family of the respondents of the experimental and control groups under the influence of complex psychocorrective measures is shown in tab. 3.
Table 2

Dynamics of attitude in a family couple of respondents of the experimental (A1 – initial study, A2 – repeated study) and control (B1 – primary study, B2 – repeated study) groups in the process of psychocorrection

<table>
<thead>
<tr>
<th>Scale</th>
<th>GPA</th>
<th>Student’s t-test</th>
<th>P</th>
<th>ANOVA (f-ratio value)</th>
<th>P</th>
<th>d Cohen</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>3.2±0.8</td>
<td>3.8±0.2</td>
<td>3.16</td>
<td>0.03</td>
<td>10.00</td>
<td>0.03</td>
<td>-1.03</td>
</tr>
<tr>
<td>II</td>
<td>1.8±0.2</td>
<td>3.0±0.4</td>
<td>18.97</td>
<td>0.00</td>
<td>1.11</td>
<td>0.35</td>
<td>-3.79</td>
</tr>
<tr>
<td>III</td>
<td>3.4±0.2</td>
<td>3.3±0.3</td>
<td>1.05</td>
<td>0.35</td>
<td>0.07</td>
<td>0.80</td>
<td>-0.22</td>
</tr>
<tr>
<td>IV</td>
<td>2.5±0.8</td>
<td>3.4±0.2</td>
<td>4.74</td>
<td>0.01</td>
<td>1.83</td>
<td>0.25</td>
<td>-1.54</td>
</tr>
<tr>
<td>V</td>
<td>2.4±0.2</td>
<td>2.3±0.1</td>
<td>2.83</td>
<td>0.05</td>
<td>8.00</td>
<td>0.04</td>
<td>0.63</td>
</tr>
<tr>
<td>VI</td>
<td>1.5±0.3</td>
<td>2.1±0.2</td>
<td>18.97</td>
<td>0.00</td>
<td>360.00</td>
<td>0.00</td>
<td>-2.35</td>
</tr>
<tr>
<td>VII</td>
<td>3.4±0.2</td>
<td>3.0±0.4</td>
<td>-6.32</td>
<td>0.00</td>
<td>360.00</td>
<td>0.00</td>
<td>0.89</td>
</tr>
<tr>
<td>VIII</td>
<td>2.0±0.8</td>
<td>1.6±0.8</td>
<td>-12.01</td>
<td>0.00</td>
<td>360.00</td>
<td>0.00</td>
<td>0.50</td>
</tr>
<tr>
<td>IX</td>
<td>2.6±0.2</td>
<td>3.2±0.6</td>
<td>4.74</td>
<td>0.01</td>
<td>22.50</td>
<td>0.01</td>
<td>-1.34</td>
</tr>
<tr>
<td>X</td>
<td>3.5±0.6</td>
<td>3.3±0.5</td>
<td>-6.32</td>
<td>0.00</td>
<td>40.00</td>
<td>0.00</td>
<td>0.36</td>
</tr>
</tbody>
</table>

Table 3

Dynamics of communication features in the family of respondents of the experimental (A1 – initial study, A2 – repeated study) and control (B1 – initial study, B2 – repeated study) groups in the process of psychocorrection

<table>
<thead>
<tr>
<th>Scale</th>
<th>GPA</th>
<th>Student’s t-test</th>
<th>P</th>
<th>ANOVA (f-ratio value)</th>
<th>P</th>
<th>d Cohen</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>3.3±0.6</td>
<td>3.4±0.5</td>
<td>3.16</td>
<td>0.03</td>
<td>10.00</td>
<td>0.03</td>
<td>-0.18</td>
</tr>
<tr>
<td>II</td>
<td>1.8±0.3</td>
<td>2.4±0.8</td>
<td>3.79</td>
<td>0.02</td>
<td>14.40</td>
<td>0.02</td>
<td>-0.99</td>
</tr>
<tr>
<td>III</td>
<td>3.5±0.5</td>
<td>3.4±0.6</td>
<td>-3.16</td>
<td>0.03</td>
<td>10.00</td>
<td>0.03</td>
<td>0.8</td>
</tr>
<tr>
<td>IV</td>
<td>2.8±0.6</td>
<td>3.2±0.3</td>
<td>4.22</td>
<td>0.01</td>
<td>17.78</td>
<td>0.01</td>
<td>-0.84</td>
</tr>
<tr>
<td>V</td>
<td>2.2±0.4</td>
<td>2.2±0.3</td>
<td>-1.00</td>
<td>0.37</td>
<td>0.00</td>
<td>0.99</td>
<td>0.00</td>
</tr>
<tr>
<td>VI</td>
<td>1.4±0.2</td>
<td>1.8±0.3</td>
<td>12.64</td>
<td>0.00</td>
<td>160.00</td>
<td>0.00</td>
<td>-1.56</td>
</tr>
<tr>
<td>VII</td>
<td>3.2±0.6</td>
<td>2.9±0.4</td>
<td>-3.50</td>
<td>0.02</td>
<td>22.50</td>
<td>0.01</td>
<td>0.59</td>
</tr>
<tr>
<td>VIII</td>
<td>1.8±0.4</td>
<td>1.5±0.5</td>
<td>-9.49</td>
<td>0.00</td>
<td>90.00</td>
<td>0.00</td>
<td>0.66</td>
</tr>
<tr>
<td>IX</td>
<td>2.5±0.3</td>
<td>3.1±0.5</td>
<td>9.49</td>
<td>0.00</td>
<td>90.00</td>
<td>0.00</td>
<td>-1.46</td>
</tr>
<tr>
<td>X</td>
<td>3.7±0.2</td>
<td>3.5±0.3</td>
<td>-6.32</td>
<td>0.00</td>
<td>40.00</td>
<td>0.00</td>
<td>0.78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scale</th>
<th>GPA</th>
<th>Student’s t-test</th>
<th>P</th>
<th>ANOVA (f-ratio value)</th>
<th>P</th>
<th>d Cohen</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>3.8±0.2</td>
<td>3.4±0.5</td>
<td>-4.22</td>
<td>0.01</td>
<td>5.16</td>
<td>0.05</td>
<td>1.05</td>
</tr>
<tr>
<td>II</td>
<td>3.0±0.4</td>
<td>2.4±0.8</td>
<td>-4.74</td>
<td>0.01</td>
<td>4.39</td>
<td>0.07</td>
<td>0.95</td>
</tr>
<tr>
<td>III</td>
<td>3.5±0.3</td>
<td>3.4±0.6</td>
<td>-1.63</td>
<td>0.18</td>
<td>0.21</td>
<td>0.65</td>
<td>0.21</td>
</tr>
<tr>
<td>IV</td>
<td>3.4±0.2</td>
<td>3.2±0.3</td>
<td>-6.32</td>
<td>0.00</td>
<td>2.67</td>
<td>0.14</td>
<td>0.78</td>
</tr>
<tr>
<td>V</td>
<td>2.3±0.1</td>
<td>2.2±0.3</td>
<td>-1.53</td>
<td>0.20</td>
<td>1.53</td>
<td>0.25</td>
<td>0.45</td>
</tr>
<tr>
<td>VI</td>
<td>2.1±0.2</td>
<td>1.8±0.3</td>
<td>2.84</td>
<td>0.05</td>
<td>6.00</td>
<td>0.04</td>
<td>1.18</td>
</tr>
<tr>
<td>VII</td>
<td>3.0±0.4</td>
<td>2.9±0.4</td>
<td>-7.00</td>
<td>0.00</td>
<td>0.29</td>
<td>0.60</td>
<td>0.25</td>
</tr>
<tr>
<td>VIII</td>
<td>1.6±0.8</td>
<td>1.5±0.5</td>
<td>-0.47</td>
<td>0.67</td>
<td>0.12</td>
<td>0.75</td>
<td>0.15</td>
</tr>
<tr>
<td>IX</td>
<td>3.2±0.6</td>
<td>3.1±0.5</td>
<td>-3.16</td>
<td>0.03</td>
<td>0.16</td>
<td>0.70</td>
<td>0.18</td>
</tr>
<tr>
<td>X</td>
<td>3.3±0.5</td>
<td>3.5±0.3</td>
<td>3.16</td>
<td>0.03</td>
<td>1.11</td>
<td>0.32</td>
<td>0.49</td>
</tr>
</tbody>
</table>
As the obtained results show, complex psychocorrective influence contributed to the improvement of communication in married couples of both studied groups. Statistically reliable and significant changes ($p<0.05$; $r \geq 0.50$) were found on the scales of trust and mutual understanding. Communication between spouses also improved statistically reliably and significantly ($p<0.05$; $r = -0.94$), it acquired signs of psychotherapy ($p<0.05$; $r = -0.94$).

Psychocorrection also contributed to an increase in the level of satisfaction with marriage in the studied respondents of both the experimental and control groups, as can be seen from tab. 4.

**Table 4**

<table>
<thead>
<tr>
<th>Average marriage satisfaction score</th>
<th>Student's t-test</th>
<th>p</th>
<th>ANOVA (f-ratio value)</th>
<th>p</th>
<th>d Cohen</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 28.9±2.3 35.4±2.5</td>
<td>102.75</td>
<td>0.00</td>
<td>10588.44</td>
<td>0.00</td>
<td>-2.71</td>
<td>-0.80</td>
</tr>
<tr>
<td>B 28.7±2.6 33.6±2.8</td>
<td>6002.50</td>
<td>0.00</td>
<td>3721.00</td>
<td>0.00</td>
<td>-1.78</td>
<td>-0.66</td>
</tr>
<tr>
<td>A1 35.4±2.5 33.6±2.8</td>
<td>1.82</td>
<td>0.05</td>
<td>2.30</td>
<td>0.17</td>
<td>0.68</td>
<td>0.32</td>
</tr>
</tbody>
</table>

If during the initial study the level of satisfaction with marriage was within transitional values with a tendency towards rather prosperous ones, psychocorrection contributed to a statistically reliable and significant ($p<0.05$; $r= -0.66$) increase in the level of satisfaction with marriage to prosperous (from 28.9 ±2.3 to 35.4±2.5 points in the experimental group and from 28.7±2.6 to 33.6±2.8 points in the control group).

In tab. 5. the dynamics of the impact of complex psychocorrection on the level of vitality of the respondents of the experimental and control research groups are shown.

**Table 5**

<table>
<thead>
<tr>
<th>Resilience indicator</th>
<th>Student's t-test</th>
<th>p</th>
<th>ANOVA (f-ratio value)</th>
<th>p</th>
<th>d Cohen</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 20.2±4.8 33.5±2.3</td>
<td>16.86</td>
<td>0.00</td>
<td>284.24</td>
<td>0.00</td>
<td>-3.53</td>
<td>-0.87</td>
</tr>
<tr>
<td>B 20.5±4.2 30.4±2.8</td>
<td>22.36</td>
<td>0.00</td>
<td>500.05</td>
<td>0.00</td>
<td>-2.77</td>
<td>-0.82</td>
</tr>
<tr>
<td>A1 33.5±2.3 30.4±2.8</td>
<td>2.70</td>
<td>0.01</td>
<td>7.31</td>
<td>0.03</td>
<td>1.21</td>
<td>0.52</td>
</tr>
</tbody>
</table>

In a preliminary study of families evacuated from the zone of active hostilities, their resilience index was in the range below the average (20.2±4.8 points in the experimental group and 20.5±4.2 points in the control group), which indicated a decrease level of viability of families of temporarily displaced persons as a result of experienced war psychotrauma.

After providing psychocorrective assistance, the resilience index increased statistically reliably and significantly in the control group to an above-average level (30.4±2.8 points, with $p<0.05$; $r = -0.82$), and in the experimental group – to a high level (33.5±2.3 points, with $p<0.05$; $r = -0.87$).

**DISCUSSION**

During the initial psychodiagnostic study, it was found that families with the consequences of war psychotrauma are characterized by a high level of manifestation of anxiety, anger, anxiety and depression, they are characterized by an increased level of conflict, non-constructive marital attitudes and psycho-emotional stickness in psychotrauma. These results corroborate the data of scientific literature sources about psychophysical exhaustion, emotional and communicative disorders as a result of war psychotrauma, which affects both an individual and his family relationships [4; 11; 12].

The negative impact of the family experiencing a war situation is related to the transformation of its structure and functions and is manifested in the reduction of the possibility of providing family support, the loss of protective and psychotherapeutic functions of the family, which indicates the risk of the breakdown of marital relations and the destruction of marriage during the war and indicates exhaustion adaptation resources of the family as a result of war trauma [3; 4; 11; 12]. At the same time, the negative characteristics of marital relations revealed as a result of the previous psychodiagnostic study arose as a result of the reaction of family members to the psycho-traumatic situation of a full-scale war, therefore
they are usually temporary and, in the case of providing timely and adequate psychocorrective assistance, have a significant recovery potential. Conducting a formative experiment was aimed at complex psychocorrection of family relationships and functions of families evacuated from the zone of active hostilities. In the respondents of the experimental group, the psychocorrective intervention was supported by the use of Ginkgo biloba. The author’s psychocorrective technique, which was based on the recommendations of O. Kokun and I. Yurchenko with co-authors [11; 12; 29], was conducted at the individual, family, group and social levels and consisted of seven meaningful blocks aimed at: correction of individual mental states of each spouse and development of resilience; correction of communication skills and internal and external communication styles of spouses; correction of family attitudes and values; correction of the educational and protective function of the family; increasing the vitality of the family and forming its psychotherapeutic function; formation of satisfaction with marriage and determination of constructive prospective directions for the development of family relations.

High indicators of behavior in the conflict situation of the respondents of both the experimental group and the control group, revealed during the initial psychodiagnostic study, indicated the unconstructiveness of marital attitudes, symptoms of anxiety-depressive reactions and aggressive behavior, inconsistency of protective mechanisms, the risk of psychosomatic disorders and psycho-emotional stuckness in psychotrauma. In the control group, the implementation of complex psychocorrective measures led to a decrease in indicators on the vast majority of scales of the technique to the range of average values with a tendency to high. In the experimental group, the addition of the drug Ginkgo biloba contributed to a more significant normalization of protective adaptive mechanisms, which made it possible to reduce the manifestations of anxiety, depression, aggressive behavior, reduce the risk of psychosomatic disorders, optimize marital attitudes and overcome fixation on psychotrauma, which is confirmed by the normalization of indicators on almost all scales of the technique. their decrease to the range of average values.

Conducting individual, family and group complex psychocorrective measures for three weeks made it possible to optimize the attitude of the respondents of both research groups both to the external environment and to members of their own family, primarily to children. Spouses’ orientation to duty and joint activities also increased. At the same time, the dynamics of the indicators of the experimental and control groups did not differ significantly. This result is explained by the fact that the Ginkgo biloba drug affects the psychophysiological mechanisms of adaptation, while personality attitudes do not depend on them. Positive dynamics of indicators of social attitudes were observed due to psychocorrective interventions and did not have statistically significant differences (p>0.05; r≥0.50).

Complex psychocorrective measures carried out over three weeks contributed to the increase of adaptive resources and the restoration of the family’s communicative, supportive and protective functions. At the same time, the positive dynamics of indicators on scales I – level of trust, III – similarity of views of spouses, V – ease of communication between spouses, and VI – psychotherapeutic family communication – was more pronounced in the experimental research group than in the control group (p< 0.05; r≥50). Apparently, the use of the Ginkgo biloba drug by the respondents of the experimental group contributed to the increase of the body’s adaptive resources, the normalization of psychophysiological processes, which increased stress resistance and reduced the manifestations of asthenic syndrome, due to which irritability decreased and normalization of the communicative function took place. The ability to dialogue, increased mutual understanding between spouses provided greater emotional support for each other, making family interaction more psychotherapeutic, which indicated the restoration of the family’s protective and supportive psychosocial function.

The results of the study confirm that families with the consequences of war psychotrauma not only have a violation of family relationships and family functions, but also a significant recovery potential, which allowed psychocorrective interventions quite quickly, within a month, statistically reliable and significant (p<0.05; r≥0, 50) to improve indicators of the well-being of the experimental group to high values, and of the experimental group to values above the average, and of the experimental group to high values, indicates not only the effectiveness of the developed model of complex psychocorrection, but also the effectiveness of the Ginkgo biloba drug, which corroborates the data of scientific literature sources regarding the possibilities of its use as a phytoadaptogen [38; 39; 40] and allows to recommend it in a complex of measures to overcome and prevent the consequences of war psychotrauma.

CONCLUSIONS

As a result of the study, the hypothesis that the use of the Ginkgo biloba drug increases the effectiveness of providing complex psychocorrective assistance to families with the consequences of war psychotrauma has been proven.

It is shown that as a result of the implementation of complex psychocorrective measures, there was
a statistically reliable and significant (p<0.05; r≥50) decrease in indicators of unconstructive relationships in the family, symptoms of depression and aggressive behavior, psychosomatic manifestations of anxiety.

The influence of complex psychocorrection on the manifestation of a clear tendency towards the normalization of the attitudes of the studied couples, increasing the orientation of spouses towards compliance with obligations and joint activities, improving communication in married couples, increasing adaptation resources, restoring the communicative, supportive and protective functions of the family, increasing the general level of satisfaction with marriage.

It has been proven that the developed and tested comprehensive psychocorrective technique is effective in increasing the resilience of families with the consequences of war psychotrauma.

A statistically reliable and significant positive effect of the Ginkgo biloba drug on the adaptive resources and vitality of the individual has been demonstrated, which contributes to the increase of stress resistance and the normalization of family relationships and allows to recommend the Ginkgo biloba drug in a complex of psychocorrective and psychoprophylactic measures to overcome the consequences of war psychotrauma.

Prospective research is planned to be directed to the study of the impact of the war psychotraumatic situation on children and the elderly and the development of appropriate psychocorrective and psychoprophylactic methods.

FUNDING AND CONFLICT OF INTEREST

No special funding was allocated for the research. There was no conflict of interest.

COMPLIANCE WITH ETHICAL REQUIREMENTS

The study was conducted with the permission of the ethics commission of the Interregional Academy of Personnel Management. All respondents provided written informed consent to participate in the study. During the research, the confidentiality of personal data of the respondents and the anonymity of the research results were ensured, which was achieved by special encryption of questionnaire forms. The principle of academic integrity was also ensured.

LITERATURE


LITЕRATURNУ І ОГЛЯД

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Клінічна та профілактична медицина, № 1(31)/2024
REFERENCES


ЛІТЕРАТУРНИЙ ОГЛЯД


ВІКОРИСТАННЯ ПРЕПАРАТУ ГІНКГО БІЛОБА В ПРОЦЕСІ НАДАННЯ КОМПЛЕКСНОЇ ПСИХОКОРЕКЦІЙНОЇ
ДОПОМОГИ СІМ’ЯМ З НАСЛІДКАМИ ПСИХОТРАВМИ ВІЙНИ
Ігор М. Грубник1, Анжела Б. Ольховська1, Ніна В. Коляденко3, Микола М. Шопша2, Олена Л. Шопша2,
Христина С. Живаго3
1 – Національний технічний університет «Харківський політехнічний інститут», м. Харків, Україна
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3 – Зіґмунд Фройд Університет Україна, м. Київ, Україна

Вступ. Тривала екстремальна кризова ситуація повномасштабної війни в Україні здійснює негативний
вплив на інститут сім’ї, структуру та функції сучасної української родини. Тому розробка ефективних
підходів щодо психокорекції родинних стосунків в умовах війни є актуальною темою дослідження.

Мета роботи – розробити та апробувати модель комплексної психокорекції сімейних відносин із вико-
ристанням препарату Гінкго білоба в умовах війни.

Матеріали та методи. В роботі використані
аналітичний, психодіагностичний, статистичний мето-
ди дослідження та метод концептуального моделювання. Методологічною основою дослідження були
розуміння людини як тілесно-багаторівневої біо-психосоціальної живої системи та емпірічний підхід.

Вибірка досліджуваних склала 44 молоді подружжя (88 осіб), тимчасово переміщені із зони активних бой-
ових дій. Випадковим чином досліджувані були розділені на дві групи: експериментальну (21 подружжя,
42 особи) та контрольну (23 подружжя, 46 осіб). В роботі були використані психодіагностичні методики:
Опитувальник «Діагностика поведінки особистості в конфліктній ситуації» (О. С. Кочарян); Методи-
ка «Установки в сімейній парі» (Ю. Є. Альошина); Спілкування в сім’ї (Ю. Є. Альошина, Л. Я. Гозман,
О. М. Дубовська); Тест-опитувальник задоволеності шлюбом (В. В. Столін, Т. Л. Романова, Г. П. Бутен-
ко); Connor–Davidson resilience scale-10. Комплексне психокорекційне втручання здійснювалося в обох
групах протягом трьох тижнів на основі авторської моделі, що містила чотири групи чинників: індиві-
дуальні, сімейні, групові, суспільні, та складалася з семи змістових блоків: 1) корекція індивідуальних
психічних станів кожного з подружжя та розвиток резільєнтності; 2) корекція комунікативних навичок
і внутрішніх та зовнішніх стилів спілкування подружжя; 3) корекція сімейних установок і цінностей;
4) корекція виховної та захисної функції сім’ї; 5) корекція виховної та захисної функції сім’ї;
6) підвищення життєстійкості сім’ї та формування її психотерапевтичної функції; 7) формування задоволеності
шлюбом та визначення конструктивних перспективних напрямків розвитку родинних взаємин. Крім того, респонденти экс-
периментальної групи протягом трьох тижнів отримували препарат Гінкго білоба у вигляді стандар-
тизованого екстракту листя (капсули Гінкго білоба- Ф 400 мг No 60 вітчизняного виробника ПТФ ТОВ
Фармаком).

Результати. Теоретично обґрунтовано, розроблено та апробовано комплексну модель комплексної
сімейних стосунків з використанням препарату Гінкго білоба, показано її ефективність щодо надання
медико-психологічної допомогі сім’ям із наслідками воєнної психотравми.

Висновки. Доведено, що розроблена та апробована комплексна психокорекційна методика є ефектив-
ною щодо підвищення резільєнсу сімей із наслідками воєнної психотравми. Продемонстровано стати-
стично достовірний та значущий позитивний вплив препарату Гінкго білоба на адаптаційні ресурси та
життестійкість особистості. Розроблено програму комплексного психокорекційного освідування та розроблені
рекомендації щодо ефективного використання препарату Гінкго білоба для підвищення резільєнності і
формування психотерапевтичної функції сім’ї.

Перспективні дослідження планується спрямувати на вивчення впливу воєнної психотравмуючої си-
туації на дітей і осіб похилого віку та розробку відповідних психокорекційних і психопрофілактичних
методик.

Ключові слова: воєнна психологія, сім’я з наслідками воєнної психотравми, тимчасово переїхані
особи, психокорекція, психопрофілактика, препарат Гінкго білоба